of phthalamide derivatives. The formula is found to be in good agreement with experiment. Present results indicate that the theory given in the above paper is capable of providing a satisfactory quantitative explanation of the experimental dependence of the Stokes shift in the fluorescent spectra on the nature of the solvent for a large group of aromatic compounds. There are 7 figures and 1 table.

SUBMITTED: March 23, 1961

Card 3/3

S/051/62/012/005/007/021
E195/E485

AUTHORS: Bakhshiyev, N.G., Klochkov, V.P., Neporent, B.S., Cherkasov, A.S.

TITLE: Absorption and fluorescence of the vapours of anthracene and its derivatives

PERIODICAL: Optika i spektroskopiya, v.12, no.5, 1962, 582-585

TEXT: The absorption and fluorescence spectra, fluorescence yields and oscillator strengths of anthracene (I) and six of its meso-derivatives were measured. The derivatives were: 9-methyl anthracene (II), 9,10-dimethyl anthracene (III), 9-phenyl anthracene (IV), 9,10-diphenyl anthracene (V), 9-diacetyl-amino-anthracene (VI) and 9-acetyl-amino-anthracene. The results show that the transition from anthracene to its derivatives is accompanied by a spread in the absorption and fluorescence spectra. This spread is more pronounced in aryl derivatives than in alkyls. The oscillator strengths of molecules in vapours are frequently larger than those of molecules in solutions. The oscillator strengths increase with increasing temperature. At relatively low temperatures the oscillator

Card 1/8

Absorption and fluorescence ...

strength in vapours is nearly identical with that in solutions at room temperature. The closeness of the oscillator strengths of 9,10-diphenyl anthracene molecules in vapours and solutions suggests that the temperature has a small effect on the absorption of this compound. Measurements of fluorescence yields after excitation by mercury light (313 and 365 mμ) are given in Table 2. These data do not agree with those previously obtained by B. Stevens (Trans. Farad. Soc., v.51, 1955, 610), G.A.Kundzich and A.A.Shishlovskiy (DAN SSSR, v.97, 1954, 429). This discrepancy requires further checking. There are 1 figure and 2 tables.

SUBMITTED: April 8, 1961

Card 2/2

S/051/62/013/001/002/019
E039/E420

AUTHORS: Neporent, B.S., Bakhshiyev, N.G., Lavrov, V.A. Korotkov, S.M.

TITLE: The effect of medium on the properties of the electronic spectra of complex molecules during the gradual transition from vapour to solution

PERIODICAL: Optika i spektroskopiya, v.13, no.1, 1962, 32-42

TEXT: The position and width of absorption and fluorescent spectra in 3-methylaminophthalimide are examined with change in concentration of ether in the range from 0 to 58 x $10^{20}$ molecules/$cm^3$ during the transition from vapour to the liquid phase, i.e. 220 → 20°C. It is shown that all the spectral characteristics investigated change monotonically with concentration of ether and that there is no sudden change during the phase transition in the solvent. The results are fully tabulated and are also shown graphically. The dielectric constant changes from 1.0 at 220°C to 4.3 at 20°C while the

BAKHSHIYEV, N.G.

Universal molecular interactions and their effect on the position of electron spectra of molecules in two-component solutions. Part 5: Dependence of spectra on the electric properties, dimensions, and structure of the molecules under study. Opt.i spektr. 13 no.1:43-51 Jl '62. (MIRA 15:7)

(Molecular spectra)

S/051/62/013/002/001/014
E032/E514

AUTHOR: Bakhshiyev, N.G.

TITLE: Universal intermolecular interactions and their effect on the position of the electronic spectra of molecules in two-component solutions. VI. Dipole moments and the structure of molecules of some derivatives of phthalamide in the ground and first excited electronic states

PERIODICAL: Optika i spektroskopiya, v.13, no.2, 1962, 192-199

TEXT: The results of previous papers (Ref.1: Opt. i spektr., 10, 717, 1961; Ref.2: Ibid, 13, 43, 1962) are extended to the case where the angle between the dipole moments of molecules in the ground and excited states is not equal to zero or 180°. The formulas for the dipole moments and the latter angle are then used to compute numerical values for these quantities and to analyse the structure of nine derivatives of phthalamade (3,6-diamino-phthalamide, 3,6-tetramethyldiaminophthalamide, 3,6-diacetylamino-phthalamide, 3-dimethylamino-6-aminophthalamide, 3-aminophthalamide, 3-acetylaminophthalamide, 3-methylaminophthalamide, 3-dimethyl-aminophthalamide, 4-aminophthalamide). Comparison of the

Card 1/2

experimental results obtained by the method suggested in Ref.2 with theoretical calculations showed that the spectroscopic study of intermolecular interactions in solutions is a very sensitive quantitative method which can be used to determine the nature of these interactions and to obtain valuable information on the electric and geometric properties and the structure of the molecules in the ground and excited states. The present and previous results obtained by the author are said to constitute convincing evidence that intermolecular interactions of the universal type are of great, and in many cases predominant, importance in the description of the effect of the solvent on the spectra. There are 3 figures and 4 tables.

SUBMITTED: May 30, 1961.

Card 2/2

S/048/62/026/010/003/013
B101/B186

AUTHOR: Bakhshiyev, N. G.

TITLE: Effect of solvents on the intensity and position of bands in electron spectra of molecules

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 10, 1962, 1237 - 1240

TEXT: Based on Western papers, a short survey is given of results from research on the effect of the medium on the spectrum. Reference is made to the author's papers (Izv. AN SSSR, Ser. fiz., 22, 1387 (1958); Optika i spektroskopiya, 7, 52 (1959); ibid. 10, 717 (1961)) wherein two types of this effect are distinguished: specific interaction caused by formation of H bonds, complexes, etc., and universal interaction caused by the effect of the solvent as a dielectric medium. The linear dependence of $\nu_{max}$ in the fluorescence spectrum of 4-amino-N-methyl phthalimide on $\varepsilon$ and n of the solvent is quoted as an example from the paper by B. S. Neporent and the author (Optika i spektroskopiya, 8, 777 (1960)). The effect which the re-

Card 1/2

fractive index of benzene and heptane exerts on the absorption spectrum of 3-dimethylamino-6-amino phthalimide dissolved therein, quoted from the author's dissertation (GOI, L., 1959). There are 3 figures. The most important English-langugae references are: N. Bayliss, E. McRae, J. Phys. Chem., 58, 1002 (1958); Y. Ooshika, J. Phys. Soc. Japan, 9, 594 (1954); N. Mataga, Y. Kaitu, M. Koizumi, Bull. Chem. Soc. Japan, 29, 465 (1956); E. McRae, J. Phys. Chem., 61, 562 (1957).

S/020/62/145/005/006/020
B104/B102

AUTHORS: Bakhshiyev, N. G., Girin, O. P., and Libov, V. S.

TITLE: Relations between observed and true absorption spectra in a condensed medium

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 5, 1962, 1025-1027

TEXT: Investigation of the relation between the molecular absorption coefficient $\varepsilon(\nu)$ of a substance (or the coefficient $K(\nu)$ in Bouguer's law) and the Einstein absorption coefficient $B(\nu)$ leads to

$$B(\nu) = \varepsilon(\nu)\frac{n(\nu)\,c}{h\nu}\frac{E^2_{cp}(\nu)}{E^2_{эфф}(\nu)} = \varphi(\nu)\frac{\varepsilon(\nu)\,c}{h\nu}. \qquad (8),$$

where $n(\nu)$ is the refraction coefficient of the medium, $E_{cp}$ the mean macroscopic field of the lightwaves in the dielectric, $E_{эфф}$ the effective microfield of the lightwaves, $\varphi(\nu)$ an arbitrary function. From this equation it was concluded that the spectral course of the experimentally determined quantity $\varepsilon(\nu)$ of a condensed medium does not agree with the true spectral

Card 1/2

characteristics of B(ν) of the absorbing center. Hence to determine the true spectrum of B(ν) of the absorbing particles in various media the experimentally determined spectra need correction taking account of the effective internal field. It is shown that the observed and the true absorption spectra of particles in a condensed system do not agree as regards position, intensity, or shape.

PRESENTED: April 3, 1962, by A. N. Terenin, Academician

SUBMITTED: March 27, 1962

S/051/63/014/004/005/026
E039/E420

AUTHORS: Bakhshiyev, N.G., Girin, O.P., Libov, V.S.

TITLE: The relation between the observed and true absorption spectra of molecules in a solid medium. 1. Universal influence of the effective (internal) field

PERIODICAL: Optika i spektroskopiya, v.14, no.4, 1963, 476-483

TEXT: A more precise understanding of the dependence of the experimental values of absorption coefficient $K(\nu)$ on frequency $\nu$ is of major importance in spectroscopy. The true absorption spectrum of molecules follows the form calculated from the Einstein coefficient of absorption $B(\nu)$, but when the investigated molecules are in a solid body the observed spectrum $K(\nu)$ and true spectrum $B(\nu)$ can differ in position, intensity and shape of bands. This difference has negligible dependence on the universal effect which is connected with the change in intensity of the light waves acting on the molecules in a dielectric (the effective or internal field) and determines the form of the frequency dependence. A simple theory is constructed which accomplishes the transition from experimental to true spectra by the calculation of a complex tensor parameter of the effective field, which completely determines

Card 1/2

The relation between ...

the value and spectral path of the correction. The theory is based on the relation between quantum and classical parameters characterized by absorption on the one hand and experimental values on the other. This enables the relation between values of $K(\nu)$ and $B(\nu)$ to be determined for the case of anisotropically polarized molecules and for isotropically absorbing media (liquid, solutions, amorphous solids). A new and more accurate expression is obtained for determining the integral of the intensity of absorption bands from experimental data.

SUBMITTED: August 20, 1962

L 11162-63 EWP(j)/EWT(l)/EWT(m)/BDS--AFFTC/ASD--Pc-4--RM
ACCESSION NR: AP3002782 S/0051/63/014/006/0745/0750

60
59

AUTHOR: Bakhshiyev, N. G.; Girin, O. P.; Libov, V. S.

TITLE: Relation between the observed and true absorption spectra of molecules in a condensed medium. 3. Taking into account the influence of the effective (internal) field according to the Lorentz and Onsager-Boettcher models.

SOURCE: Optika i spektroskopiya, v. 14, no. 6, 1963, 745-750

TOPIC TAGS: molecular absorption, true spectra, Onsager-Boettcher model, Lorentz model

ABSTRACT: The present work is concerned with the problem of determining the relation between the observed and true absorption spectra of molecules in a condensed medium in the framework of the Lorentz and Onsager-Boettcher models for the molecule plus medium (solvent) system. In earlier papers (Optika i spektro., 14, 28, 1963 and Doklady AN SSSR, 145, 1025, 1962) the authors derived a general equation for the true absorption spectrum in terms of the observed spectrum, the correction for the universal influence of the effective (internal) field, the components of the tensor of the effective field parameter, and the direction cosines of the dipole moment of the transition. In the present paper, specific but generally applicable calculations are performed for the case of isotropically polarizing

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L 11162-63
ACCESSION NR: AP3002782

absorbing molecules. It is shown that, depending on the properties of the molecule and medium, there may occur different phenomena which may distort the true spectrum: shift the bands and alter their intensity and shape. The specific case of the absorption in the region of the fundamental frequency of a hypothetical liquid molecule is examined and the effect of corrections of the effective field according to the Lorentz and Onsager-Boettcher theories is shown. It is predicted that appreciable changes may be expected in the electronic spectra of strongly absorbing substances, such as dyes. It is pointed out that failure to allow for the distorting effects of various factors may lead to serious errors in interpreting experimental spectra. The authors plan to discuss the properties of some particular substances and systems in future contributions. Orig. art. has: 26 formulas and 2 figures.

ASSOCIATION: None

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| SUBMITTED: 20Aug62 | DATE ACQD: 15Jul63 | ENCL: 00 |
| SUB CODE: 00 | NO REF SOV: 005 | OTHER: 005 |

cs/Sm

Card 2/2

L 10161-63 EPF(c)/EWT(m)/BDS--P.-4--RM/
WW/MAY

ACCESSION NR: AP3000313 S/0048/63/027/005/0623/0627

AUTHOR: Piterskaya, I. V.; Bakhshiyev, N. G.

TITLE: Quantitative investigation of the temperature dependence of the absorption and fluorescence spectra of complex molecules [Report: Eleventh Conference on Luminescence held in Minsk 10-15 Sept. 1962]

SOURCE: Izvestiya AN SSSR. Seriya fizicheskaya, v. 27 no. 5, 1963, 623-627

TOPIC TAGS: absorption of molecules, fluorescence of molecules, aminophthalimides, molecular interaction

ABSTRACT: In an earlier paper one of the authors, Bakhshiyev, N. G. (Opt. i Spektr., 10, 717, 1961) proposed a simple but general theory describing the influence on the electronic spectra of molecules in liquid two-component solutions of universal intermolecular interactions of the orientation, induction, dispersion and dynamic types. The key equation characterizes the frequency shift in going from vapor to solution as a function of the dielectric constant, index of refraction and other parameters of the emitting and solvent molecules.

Card 1/2

L 10161-63
ACCESSION NR: AP3000313

The present work is devoted to application of the Bakhshiyev theory to interpretation of experimental results as regards temperature dependent frequency shifts. The investigated compounds were 4-amino, 3-amino and 3,6-aminophtalimides dissolved in benzene, ethyl acetate and isoamyl alchol. The absorption and fluorescence spectra were recorded at temperatures from 20 to 250-350°C on a modified SF-4 spectrophotometer (absorption) and a photoelectric spectrometer. The experimental data are presented in the form of curves and tables. While a detailed discussion of the experimental results will be published elsewhere, it is pointed out that in the case of mono- and diamine phthalimide derivatives the effect of temperature on the absorption and fluorescence spectra is quantitatively predicted by the Bakhshiyev theory, which indicates that universal intermolecular interactions play a decisive role in the temperature behavior of the spectra of the investigated compounds in solutions. Orig. art. has: 3 equations, 2 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: PH NR REF SOV: 017 OTHER: 006

Card 2/2

L 9852-63 EWT(1)/FCC(w)/BDS--AFFTC/ASD/ESD-3--IJP(C)

ACCESSION NR: AP3000580 S/0051/63/014/005/0634/0638

57

AUTHOR: Bakhshiyev, N. G.; Girin, O. P.; Libov, V. S.

TITLE: Relation between the observed and true absorption spectra of molecules in the condensed state. 2. Method of determining the correction for the universal influence of the effective (internal) field

SOURCE: Optika i spektroskopiya, v. 14, no. 5, 1963, 634-638

TOPIC TAGS: absorption spectra, internal fields

ABSTRACT: In earlier contributions by the authors (Doklady AN SSSR, 145, 1025, 1962; Opt. i spektr., 14, 28, 1963) it was pointed out that the true absorption spectrum of molecules is the frequency variation of the Einstein absorption coefficient B, and then when the molecule is in a condensed state the observed spectrum, characterized by the usual coefficient K, differs from the true spectrum. Accordingly in the present paper there are developed methods for determining the magnitude and frequency dependence of the correction to the observed spectrum due to the universal influence of the effective (internal) field of the molecule. It is demonstrated that the requisite relationships

Card 1/2

L 9852-63
ACCESSION NR: AP3000580

between the optical characteristics of an isotropic absorbing medium and the microscopic characteristics of the absorbing molecule (the polarizability and effective field tensors) can be found in several ways, two of which are considered in some detail. The first is based on use of the general expression for polarization of an absorbing dielectric; the second consists in seeking the relation between the quantum mechanical and classical quantities characterizing the absorptive capacity of the molecule in a condensed medium. Expressions for determining the effective field and other parameters of molecules in different media from experimental data are adduced. Orig. art. has: 23 equations.

ASSOCIATION: none

SUBMITTED: 20Aug62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: PH NR REF SOV: 005 OTHER: 002

Card 2/2

S/053/63/079/002/002/004
B102/B186

AUTHORS: Girin, O. P., and Bakhshiyev, N. G.

TITLE: The effect of the solvent on the position and intensity of the bands in infrared molecule spectra

PERIODICAL: Uspekhi fizicheskikh nauk, v. 79, no. 2, 1963, 235 - 262

TEXT: The present article gives an incomplete review of the literature of recent years and a critical discussion of the most important papers dealing with the solvent effects on the IR band spectra. Special attention is paid to possibilities of generalization and to the theoretical difficulties that arise in a proper description of the interaction. There are 14 figures, 2 tables, and 125 references.

Card 1/1

L 12834-63 EWP(j)/EPF(c)/EWT(m)/BDS Pr-4/Pc-4 RM/WW 63
ACCESSION NR: AP3002219 S/0020/63/150/006/1256/1259

AUTHOR: Bakhshiyev, N. G.; Girin, O. P.; Libov, V. S.

TITLE: Apparent and true absorption spectra of liquid $CHCl_3$ and $CCl_4$ in the 740-810 $cm^{-1}$ range

SOURCE: AN SSSR. Doklady*, v. 150, no. 6, 1963, 1256-1259

TOPIC TAGS: absorption spectra, $CHCl_3$, $CCl_4$, absorption coefficient

ABSTRACT: The authors presented in a previous paper (DAN, 145, 1962, 1025) the relationship between the observed molecular absorption coefficients and the true (Einstein's) coefficients which are determined by the internal properties of the molecule. The correction factor is given by the changes of the electric field of the light wave caused by the medium. In the present work this correction is used for obtaining the real absorption coefficients of the spectrum which corresponds to the fundamental vibration of C-Cl. The absorption spectrum of $CHCl_3$ and $CCl_4$ in both the liquid and gaseous state were experimentally obtained and corrected according to the mentioned formulas.

Card 1/2

L 12834-63
ACCESSION NR: AP3002219

The observed and the corrected spectra absorption coefficients are given in two figures. The results confirm the conclusions of the quoted paper that the observed absorption spectra differ greatly from the true ones. This report was presented by Academician A. N. Terenin, 18 Jan 63. Orig. art. has: 3 formulas, 2 figures and 2 tables.

ASSOCIATION: none

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| SUBMITTED: | 04Jan63 | DATE ACQ: | 24Jul63 | ENCL: | 00 |
| SUB CODE: | PH, EL | NO REF SOV: | 002 | OTHER: | 004 |

Card 2/2

BAKHSIYEV, N.G.

New spectroscopic method for studying the anisotropy of electron transitions in polar molecules. Dokl. AN SSSR 152 no.3:577-580 S '63. (MIRA 16:12)

1. Predstavleno akademikom A.N.Terenin.

LIBOV, V.S.; BAKHSHIYEV, N.G.

Quantitative study of the absorption and dispersion of $CHCl_3$ and $CCl_4$ in the region of strong infrared absorption bands. Opt. i spektr. 16 no.2:223-227 F '64. (MIRA 17:4)

BAKHSHIYEV, N.G.; NEPORENT, B.S.

Further on universal and specific interactions in solutions and "universal" solvent scales (in connection with V.V.Zelinskii and V.P.Kolobkov's article). Opt. i spektr. 16 no.2:351-359 F '64. (MIRA 17:4)

BAKHSHIYEV, N.G.

Universal molecular interactions and their effect on the position of electron spectra of molecules in two-component solutions. Part 7. Opt. i spektr. 16 no.5:821-832 My '64. (MIRA 17:9)

LIKOV, V.S.; BARSHCHEVSKIY, N.G.; GIBIN, G.P.

Relation between the observed and true molecular absorption spectra in a condensed medium. Part 4. Opt. i spektr. 16 no.6:1016-1023 Je '64. (MIRA 17:9)

L 05769-67 EWT(l) IJP(c)

ACC NR: AR6031872 SOURCE CODE: UR/0058/66/000/006/D092/D092

AUTHOR: Al'perovich, L. I.; Bakhshiyev, N. G.; Korovina, V. M.

19
B

TITLE: Optical constants of diluted solutions of complex molecules

SOURCE: Ref. zh. Fizika, Abs. 6D752

REF SOURCE: Sb. optich. issled. molekulyarn. dvizheniya i mezhmolekulyarn. vzaimodeystv. v. zhidkostyakh i rastvorakh. Tashkent, Nauka, 1965, 187-205

TOPIC TAGS: optic constant, complex molecule, absorption line

ABSTRACT: The differences of refraction indices of a solution (n) and solvent ($\bar{n}$) in a field of ~ 600—200 m$\mu$ have been measured for diluted solutions of n-nitrosodimethylaniline in $CCl_4$ (I), rhodamine in water (II), crystal violet in water (III), and malachite green in water (IV). The values of $[(n-\bar{n})_{max}-(n-\bar{n})_{min}] \times 10^5$ are: I—3.8, II—5.9, III—7.7, and IV—4.7. The calculations by equations of the Davidov theory is in good agreement with the experiment. Experimental and calculated absorption lines and dispersion curves of solutions are presented.
E. Broun. [Translation of abstract]

SUB CODE: 20/

Card 1/1 nlr

L 14837-66 EWT(l) LJP(c) AT

ACC NR: AP5025298 SOURCE CODE: UR/0051/65/019/004/0535/0543

AUTHOR: Bakhshiyev, N. G.

ORG: None

TITLE: Universal intermolecular interactions and their influence on the position of electron spectra of molecules in two-component solutions. Part 9: Anisotropy of redistribution of electron density in polar organic molecules during optical excitation

SOURCE: Optika i spektroskopiya, v. 19, no. 4, 1965, 535-543

TOPIC TAGS: molecular interaction, dipole moment, electron spectrum, electron density, phthalimide, maleimide, molecular spectrum

ABSTRACT: On the basis of experimental data obtained earlier, the magnitude and absolute orientation of vector $\Delta\mu$ (which is equal to the vector difference $\mu_e - \mu_g$, $\mu_e$ being the dipole moment of the molecule in the excited state and $\mu_g$ being the dipole moment in the ground state) were determined relative to the skeleton of the molecule for a group of phthalimide derivatives. Vector $\Delta\mu$ characterizes the anisotropy of redistribution of the electron density during an optical transition, and provides an indirect indication of the direction in which

Card 1/2 UDC: 539.196.3

L 14837-66

ACC NR: AP5025298

the electron cloud of the molecule is shifted during the excitation process. The data obtained on the electronic structure and spectroscopic properties of phthalimide and maleimide derivatives are in accord with many earlier investigations of compounds of this class, performed by other authors. It is concluded that spectroscopic methods based on a quantitative study of the effect of intramolecular interactions on molecular spectra provide valuable information on the properties of excited states of molecules and their electronic configuration, and also on the nature of the corresponding energy transitions. Author is grateful to Z. Ch. Grabovskiy for a discussion of some problems dealt with in the article and for useful comments. Orig. art. has: 6 figures, 4 tables, and 4 formulas.

SUB CODE: 20 / SUBM DATE: 09Jun64 / ORIG REF: 013

Card 2/2

L 36431-66 EWP(j)/EWT(l)/EWT(m) IJP(c) RM

ACC NR: AP6015420 SOURCE CODE: UR/0051/66/020/005/0783/0792

AUTHOR: Bakhshiyev, N. G.; Piterskaya, I. V. 38 B

ORG: none

TITLE: Universal intermolecular interactions and their effect on the position of electron spectra of molecules in two-component solutions. Part 12: Dependence of absorption and fluorescence spectra of phthalimide derivatives on temperature and the state of aggregation of the solvent (+20 to -196°C)

SOURCE: Optika i spektroskopiya, v. 20, no. 5, 1966, 783-792

TOPIC TAGS: absorption spectrum, fluorescence spectrum, electron spectrum, molecular interaction

ABSTRACT: Using the concept of the important part played by universal molecular interactions in the phenomenon of spectral shifts in solutions for any relative values of $\tau_r'$ (time of orientational relaxation of the molecules of the medium) and $\tau_f$ (time spent by the molecule studied in the electronic state), the authors investigated the absorption and fluorescence spectra of a series of organic molecules in solutions between +20 and -196°C. This temperature range was chosen because any relative values of $\tau_r'$ and $\tau_f$ (from $\tau_r' \ll \tau_f$ to $\tau_r' \gg \tau_f$) can be obtained in it. The compounds studied (4-amino, 3-amino, 3-monomethylamino-, 3-acetylamino, 3,6-diamino, 3,6-tetramethyldiamino-, and 3,6-diacetylaminophthalimide) had continuous fluorescence and ab-

Card 1/2 UDC: 539.196.3

ACC NR: AP6015420

sorption spectra, and the solvents used were isobutyl, butyl and propyl alcohol, and glycerin. The results show that the important role of universal intermolecular interactions in the temperature shifts of electron spectra of molecules in solvents is confirmed in the low-temperature range as well. It is concluded that the theory (N. G. Bakhshiyev, Opt. i spektr., 16, 821, 1964) permits a satisfactory description of the influence of temperature and state of aggregation on the position of electron spectra of molecules in a temperature range reaching 450-500°C. Orig. art. has: 3 figures, 5 tables, and 2 formulas.

SUB CODE: 07/ SUBM DATE: 02Feb65/ ORIG REF: 034/ OTH REF: 007

Card 2/2

L 01515-67 EWP(j)/EWT(l)/EWT(m) IJP(c) EM

ACC NR: AP6018439 SOURCE CODE: UR/0051/66/020/006/0976/0981

AUTHOR: Bakhshiyev, N. G.

42
B

ORG: none

TITLE: Multiple intermolecular interactions and their effect on the electron spectra position of molecules in binary solutions. XIII. The physicochemical properties of some molecular complexes

SOURCE: Optika i spektroskopiya, v. 20, no. 6, 1966, 976-981

TOPIC TAGS: intermolecular complex, electron donor, excited state, electron spectrum

ABSTRACT: A spectroscopic method of determining some electrical and geometrical characteristics and physicochemical parameters of molecules is analyzed. The method is based on a quantitative investigation of the effect of intermolecular interactions on their electron spectra. The following two complexes were examined: a complex of 1-ethyl-4-carbomethoxypyridine with iodine (Complex I), and a complex of hexamethylbenzene with tetrachlorophthalic anhydride (Complex II). Complex I was investigated with a number of solvents of different chemical composition. It appears that its low intensity broad band is extremely sensitive to intermolecular interactions; in the transition from a pyridine to an aqueous solution, it shifts into a short wave range by more than 10,000 $cm^{-1}$. An evaluation of the dipole moment revealed that in the

Card 1/2 UDC: 539.196.3

ACC NR: AP6018439 O

formation of Complex I, a complete electron transfer from the aromatic molecule to iodine takes place; this transfer is followed by a transformation of the interacting particles into an ion pair. Complex II is of the π-donor-acceptor type, formed by interaction of π-electron clouds of molecules. After experimentation with 9 different solvents, previously reached conclusions as to the electron structure of Complex II in both principal and excited states were confirmed. The spectroscopic method can be successfully used for the determination of a number of microscopic characteristics of molecular complexes. Orig. art. has: 4 figures, 2 tables, 3 formulas.

SUB CODE: 07,20/ SUBM DATE: 02Feb65/ ORIG REF: 010/ OTH REF: 004

Card 2/2

EFENDIYEV, F. A., prof.; ABDULLAYEV, M. M.; BAKHSHIYEVA, Ye. B. [deceased]

Changes in blood coagulation factors and fibrinolytic activity in leucoses. Probl. gemat. i perel. krovi no.10:19-28 '61. (MIRA 14:12)

1. Iz Azerbaydzhanskogo nauchno-issledovatel'skogo instituta gematologii i perelivaniya krovi (dir. - dotsent G. A. Guseynov) i fakul'tetskoy khirurgicheskoy kliniki (dir. - prof. F. A. Efendiyev) Azerbaydzhanskogo gosudarstvennogo meditsinskogo instituta.

(LEUCOSIS) (BLOOD--COAGULATION) (FIBRINOLYSIS)

L 34416-66 EWT(l)/EWP(m)/T/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6015441 SOURCE CODE: UR/0051/66/020/005/0918/0920

AUTHOR: Bakhshiyeva, G. F.; Karapetyan, V. Ye.; Morozov, A. M.

ORG: none

TITLE: Optical characteristics of lanthanum sodium molybdate single crystals

SOURCE: Optika i spektroskopiya, v. 20, no. 5, 1966, 918-920

TOPIC TAGS: molybdate, lanthanum compound, sodium compound, refractive index, crystal optic property

ABSTRACT: Large single crystals of $LaNa(MoO_4)_2$ whose C axis was parallel to the axis of growth were grown on a seed by pulling from the melt, and their absorption spectra and refractive indices were measured. The absorption spectrum of an $LaNa(MoO_4)_2$ crystal taken with SF-4 and IKS-14 spectrophotometers is shown in the figure. It is noted that the absorption spectra are typical of all crystals having a scheelite structure. Refractive index measurements showed that the light ray is "fractionated" on passing through an $LaNa(MoO_4)_2$ prism, apparently because the lattice of this binary molybdate is highly disordered. This factor is also thought to cause the relatively broad luminescence lines of $Nd^{3+}$ in $LaNa(MoO_4)_2$ and the broad ESR lines of this compound reported by other authors. Authors express their deep appreciation to A. I. Stozharov and P. P. Feofilov for their steady interest and helpful discussions, and

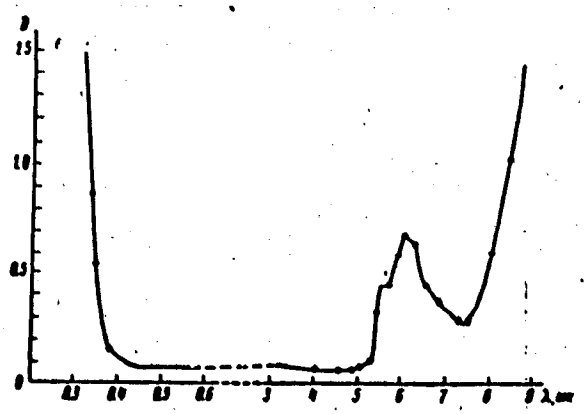
UDC: 535.321 + 535.341:548.0

Card 1/2

L 34416-66

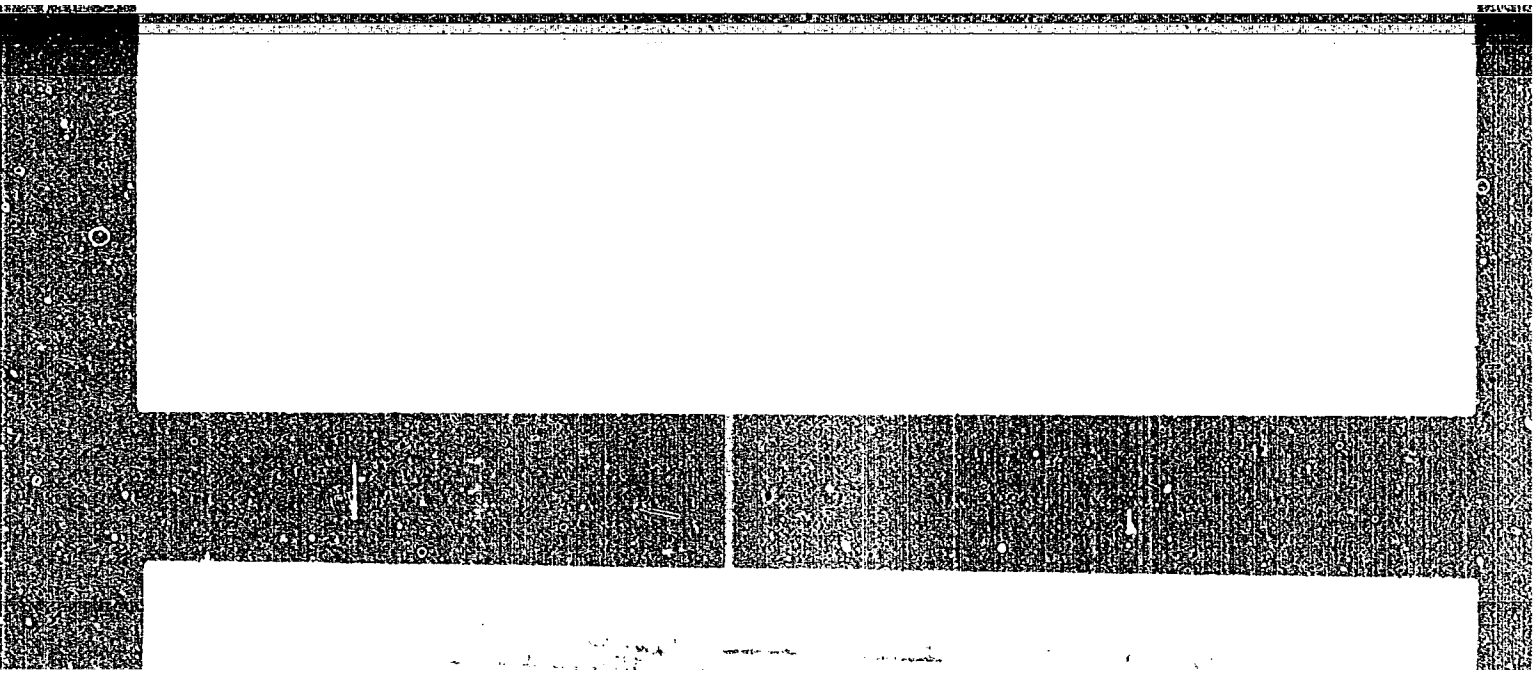
ACC NR: AP6015441

tc Ye. M. Sychev and I. A. Shube for assistance in the work. Orig. art. has: 1 figure and 1 table.

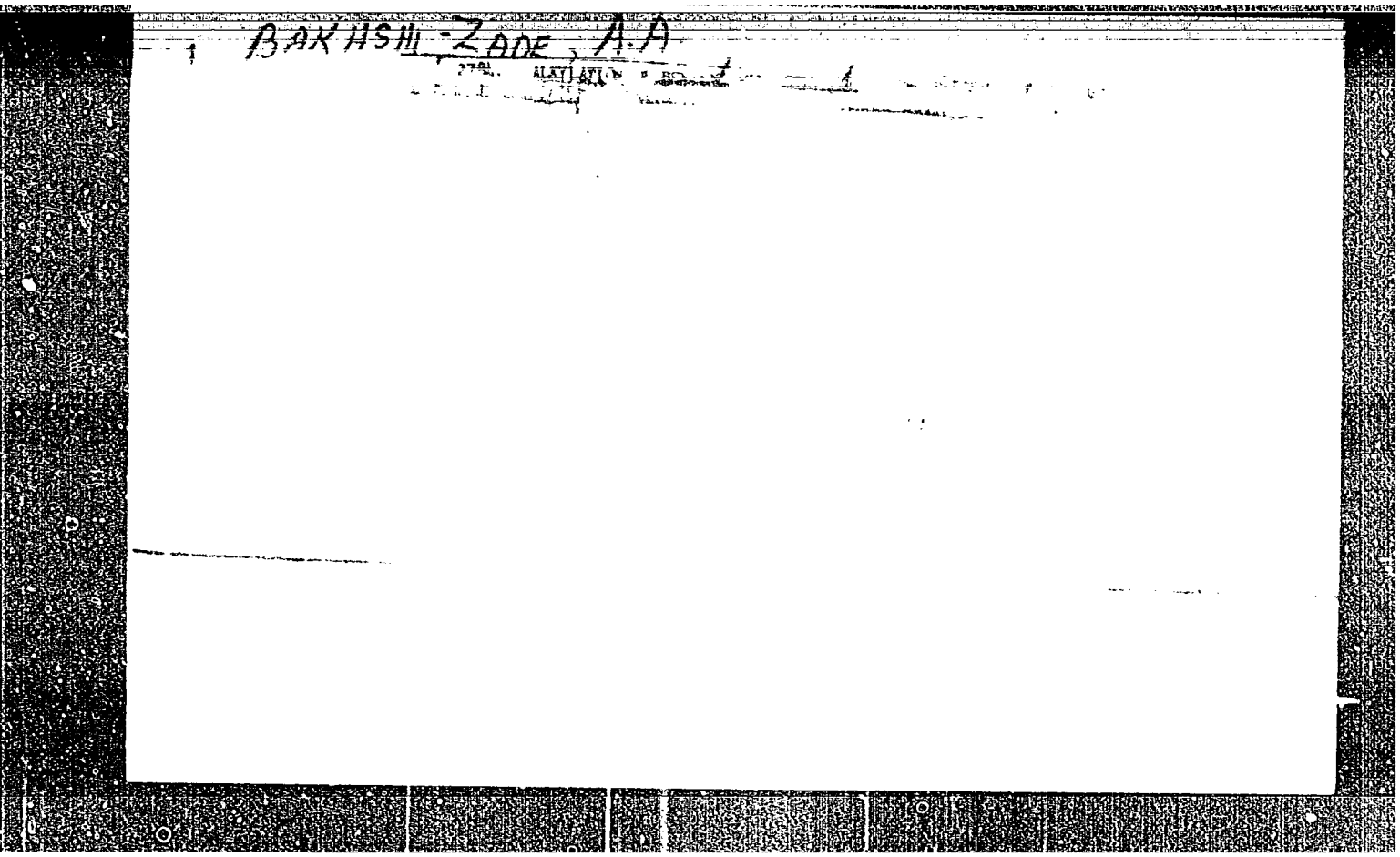


SUB CODE: 20/ SUBM DATE: 18Oct65/ ORIG REF: 003/ OTH REF: 006

Card 2/2 BLG



APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103110015-9"



Bakhshizade, A.A.

USSR/Organic Chemistry. Synthetic Organic Chemistry. E-2

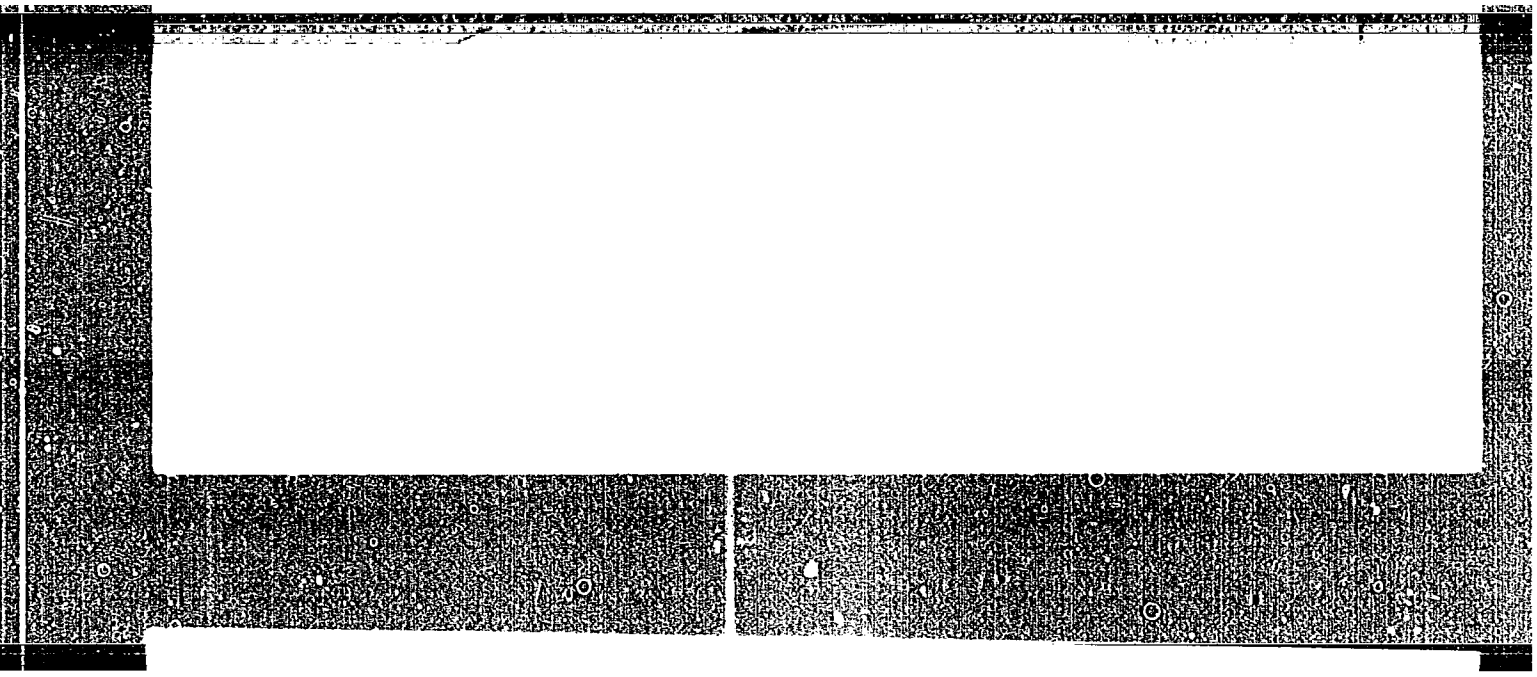
Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26681.

Author : Abdullayev, G.K.; Bakhshizade, A.A.
Inst : Azerbaydzhan University.
Title : Analysis of Secondary Products of Direct Hydration of Ethylene.

Orig Pub : Elmi eserler. Azerb. univ., Uch. zap. Azerb. un-ta, 1956, No. 10, 25 - 30.

Abstract : It was established that the secondary products of the direct hydration of $CH_2=CH_2$ in presence of phosphate catalysts contained 46.2% of olefins, of which there was 7.3% of diene hydrocarbons, 27.13% of paraffins, 3% of which having been alifatic alcohols (the fraction 2,2-dimethylbutanol was separated), 19.9% of naphthenes and 6.77% of aromatics. The fractions 2-methyl-pentane,

Card 1/2



APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103110015-9"

BAKHSHI-ZADE, A.A.; SMIDOV, N.I.

Liquid-phase oxidation of m-xylene and p-xylene. Uch. zap. AGU no.1:61-64 '58. (MIRA 12:1)

(Xylene)

SEIDOV, N.M.; BAKHSHI-ZADE, A.A.; MEKHTIYEV, S.D.

Liquid phase oxidation of xylene isomers by atmospheric oxygen.
Azerb.khim.zhur. no.1:23-29 '59. (MIRA 13:6)
(Xylene) (Oxidation)

MEKHTIYEV, S.D.; BAKHSHI-ZADE, A.A.; SEIDOV, N.M.

Photochemical oxidation of xylene isomers [in Azerbaijani with summary in Russian]. Azerb. khim.zhur. no.4:9-14 '59. (MIRA 14:9)
(Xylene) (Ultraviolet rays)

3/081/61/000/002/023/023
A005/A101

Translation from: Referativnyy zhurnal, Khimiya, 1961, No. 2, p. 608, # 2R109

AUTHORS: Buniyat-zade, A. A., Pis'man, I. I., Bakhshi-zade, A. A.

TITLE: The Copolymerization of Olefines. Report I. The Copolymerization of Ethylene With Propylene

PERIODICAL: Uch. zap. Azerb. un-t. Fiz.-matem. i khim. ser., 1959, No. 4, pp. 77-80 (Azerb. summary)

TEXT: The authors studied the polymerization of ethylene-propylene mixtures containing 13-15% by volume of propylene, on a chromic catalyst in the presence of a solvent (benzine "galosha"). The optimum temperature for the studied conditions is 100-110°C, the optimum pressure lies within the range of 30-35 atm. The data in literature are corroborated: the molecular weight of the polymer decreases with increasing temperature and increases with increasing pressure.

Author's summary

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

BAKHSHI-ZADE, A.A.; SEIDOV, N.M.; SMIRNOVA, N.A.

Separation of xylene isomers by the alkylation method. Azerb. neft. khoz. 38 no.9:37-38 S '59. (MIRA 13:2)
(Xylene) (Alkylation)

MEKHTIYEV, S.D.; BAKHSHI-ZADE, A.A.; MEKHTIYEV, S.I.

Synthesis of glycerol by the direct hydroxylation of allyl alcohol by hydrogen peroxide. Azerb.khim.zhur. no.5:47-58 '61. (MIRA 15:5)

(Glycerol) (Allyl alcohol) (Hydrogen peroxide)

83133

S/020/60/133/005/010/019
B016/B060

5.3831

AUTHORS: Dalin, M. A., Academician AS AzerbSSR, Pis'man, I. I., Bakhshi-Zade, A. A., Buniyat-Zade, A. A.

TITLE: Copolymerization of Ethylene With Propylene and α-Butylene on Chromium Oxide Catalyst

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 5, pp. 1084-1085

TEXT: The authors wanted to carry out the synthesis mentioned in the title and to study more thoroughly the properties of the substances mentioned. The first results of their investigations are supplied in the present paper. For their experiments the authors made use of Vishnevskiy's mixer (Ref. 3). The solvent used was extraction benzine purified by activated chromium catalyst. The catalyst was prepared by the well-known method of Ref. 4. The ethylene- and propylene fractions of pyrogas were used as monomers. The butylenes were produced by dehydration of n-butyl alcohol upon aluminum oxide of the type A-1 (A-1) at 360°C. The mixture

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83133

Copolymerization of Ethylene With Propylene and α-Butylene on Chromium Oxide Catalyst

S/020/60/133/005/010/019
B016/B060

contained 2 - 3% of isobutylene and 97 - 98% of normal butylenes. The butylene fraction was dehydrated on fine-porous silica gel and calcium hydride during production. The gas mixtures were prepared in carefully dried metal balloons. After the pressure drop had stopped the autoclave was allowed to cool and pressure was reduced. The copolymer taken from the autoclave was heated together with the catalyst in a vessel with ligroin, and was subsequently filtered off the catalyst on a paper filter. The polymer was then washed with ethanol, dried, and analyzed. Table 1 shows the properties of polyethylene, which constitutes a copolymer of ethylene with propylene. It contains (in % by weight): propylene 12.6, ethylene 87.4, and ethylene-α-butylene copolymer (7% of butylene and 93% of ethylene). As can be seen from Table 1, the copolymers of ethylene with propylene and with α-butylene differ from polyethylene with respect to melting temperatures, solubility in n-heptane, and specific elongation in cold drawing. The greater flexibility is striking but so is also a lesser strength of the ethylene-propylene copolymer as compared with polyethylene. The ethylene-α-butylene copolymer comes near

Card 2/3

83133

Copolymerization of Ethylene With Propylene and α-Butylene on Chromium Oxide Catalyst

S/020/60/133/005/010/019
B016/B060

polyethylene as to strength but surpasses it as to elasticity. There are 1 table and 5 references: 2 Soviet, 1 US, 1 Belgian, and 1 Italian.

SUBMITTED: February 5, 1960

Card 3/3

MEKHTIYEV, S.D.; BAKHSHI-ZADE, A.A.; MEKHTIYEV, S.I.

Synthesis of diatomic alcohols by the hydroxylation of olefins with hydrogen peroxide. Azerb.khim.zhur. no.6:33-38 '60.
(MIRA 14:8)

(Alcohols) (Olefins) (Hydrogen peroxide)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000103110015-9

[illegible] TYLY, S.D.; MAMSHI-ZADE, A.A.; [illegible]

Direct [illegible] of lower [illegible] weight olefins by [illegible]. Izv. vys. ucheb. zav.; neft' i gaz 11:109-110 '68. (MIRA 14:3)

1. [illegible] (Olefins) (Hydrogenation)

S/081/62/000/004/086/087
B102/B101

AUTHORS: Dalin, M. A., Shenderova, R. I., Pis'man, I. I., Bakhshi-zade, A. A., Vedeneyeva, L. Ya., Buniyat-zade, A. A.

TITLE: Synthesis of polyethylene and of copolymers of ethylene with propylene and α-butylene on an chromium oxide catalyst

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962, 669, abstract 4R128 (Azerb. khim. zh., no. 1, 1961, 17 - 22)

TEXT: Purification of ethylene (I) was carried out on a pilot-plant scale allowing for an increase in efficiency of the oxide-chromium oxide catalyst (COC) up to 176 - 250 g/g when I is polymerized in extraction benzine purified with sulfuric-acid, or in cyclohexane (120 - 130°C, 3 - 5 hrs, 45 at, COC concentration 0.13 - 0.25%). When ethylene is co-polymerized with propylene (II) (6.7 - 15% by volume) (110 - 120°C, 40 at) in benzine in the presence of an $CaC_2$ activator (20% of the catalyst's weight), the efficiency of the COC is reduced to 68 - 135 g/g owing to the lower reactivity of II and to its incomplete purification. The copolymer

Card 1/2

(CP) differs from the polymer of I by its lower crystallinity. The content of crystalline phase decreases with increasing polymerization temperature and increases with pressure. Polymer, melting point in °C, relative elongation in %, rupture strength in kg/cm$^2$, and solubility in n-heptane are enumerated: I, 128 - 130, 370 - 600, 260 - 300, 10 - 15; CP of I with II, 122 - 126, 720 - 1020, 170 - 220, 60 - 70; CP of I with α-butylene (2.5 - 4.5 vol%), 125 - 127, 500 - 800, 250 - 300, 30 - 40. [Abstracter's note: Complete translation.]

Card 2/2

DALIN, M.A.; BAKHSHI-ZADE, A.A.; PIL'MAN, I.I.; BUNIYAT-ZADE, A.A.

Some properties of the copolymer of ethylene with propylene.
Azerb.khim.zhur. no.1:25-29 '60. (MIRA 14:9)
(Ethylene) (Propene)

S/081/62/000/006/045/117
B101/B110

AUTHORS: Buniyat-zade, A. A., Belkina, A. M., Bakhshi-zade, A. A., Petukhova, L. N.

TITLE: Destructive alkylation of toluene by means of pentane

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 199, abstract 6Zh114 (Uch. zap. Azerb. un-t. Ser. fiz.-matem. i khim. n., no. 1, 1960, 91 - 95)

TEXT: Destructive alkylation of toluene by means of n-pentane over a synthetic aluminosilicate catalyst was studied. The effect of temperature, pressure, and the volume rate on the reaction was investigated. The experiments were made by a method described earlier (RZhKhim, 1957, no. 13, 45505). It has been found that the main products of the reaction are aromatic compounds and a fraction boiling out at 125 - 145°C, $n_D^{20}$ 1.4970, $d_4^{20}$ 0.8650. Raman scattering showed that this fraction consists of 27 % n-, 47 % m-, 12 % o-xylene, and 14 % ethyl benzene. Oxidation of this fraction by means of $KMnO_4$ in alkaline medium yields 87.7 %

Card 1/2

Destructive alkylation of ...

S/081/62/000/006/045/117
B101/B110

phthalic acids. The fractions with b. 145 - 200°C, $n_D^{20}$ 1.5010, $d_4^{20}$ 0.8704, and with b. > 200°C, $n_D^{20}$ 1.5390, $d_4^{20}$ 0.899, consist of methyl ethyl-, methyl isopropyl-, methyl isobutyl benzene, and other aromatic compounds. It has been found that at 350 - 450°C the components of the reaction remain practically unchanged. At 450, 475, and 500°C, the total yield in catalyzate with b. > 125°C suddenly increases reaching 11.5, 12, and 17.4%, respectively. A temperature increase up to 520°C has no noticeable effect on the course of reaction. If the volume rate is reduced from 0.5 to 0.3 and 0.1 volumes of raw material per unit volume of the catalyst and per hour, the yield in products boiling out above 125°C increases to 21.6 and 27.6 %, respectively. If pressure is reduced from 40 to 20 atm the yield decreases by more than 2/3, and an increase in pressure up to 60 atm affects the reaction course only slightly. The gases arising in the course of the reaction consist mainly of saturated hydrocarbons and hydrogen. [Abstracter's note: Complete translation.]

Card 2/2

DALIN, M.A.; SHENDEROVA, R.I.; PIS'MAN, I.I.; BAKHSHI-ZADE, A.A.; VEDENEYEVA, L.Ya.; BUNIYAT-ZADE, A.A.

Synthesis of polyethylene and ethylene copolymers with propylene and $\alpha$-butylene on a chromium oxide catalyst. Azerb.khim.zhur. no.1:17-22 '61. (MIRA 14:8)
(Polyethylene) (Ethylene)

MEKHTIYEV, S.D.; BAKHSHI-ZADE, A.A.; SEIDOV, N.M.; KAMBAROV, Yu.G.

Separation of m- and p-xylenes by selective alkylation followed by dealkylation. Neftekhimiia 1 no.1:54-59 Ja-F '61. (MIRA 15:2)

1. Institut neftekhimicheskikh protsessov AN AzSSR.
(Xylene) (Alkylation)

DALIN, M.A.; PIS'MAN, I.I.; BAKHSHI-ZADE, A.A.; BUNIYAT-ZADE, A.A.; POKOTILOVA, S.D.

Copolymerization of ethylene with α-olefins on a chromium oxide catalyst. Azerb.khim.zhur. no.2:9-16 '61. (MIRA 14:8)
(Ethylene) (Olefins) (Polymerization)

SEIDOV, N.M.; BAKHSHI-ZADE, A.A.; CHERNIKOVA, I.M.; MELIKOVA, Z.M.

Transformations of α-methylstyrene on aluminosilicates. Azerb.-khim.zhur. no.5:67-62 '62. (MIRA 16:5)
(Styrene) (Aluminosilicates)

[illegible], A.G.; [illegible], A.A., BAKIKHANOV, A.A., ALIMARDANOV, G.I.

Activity of chromium strontium silicate catalysts in the reaction of copolymerization of ethylene with $\alpha$-olefins. Azerb. khim. zhur. no.1:117-123 '64. (MIRA 17:5)

L 60265-65 EPF(c)/EWP(j)/EWT(m) Pc-4 Pr-4 WA/RM
ACCESSION NR: AP5021066 UR/0316/64/000/004/0041/0045

AUTHOR: Babayev, O. N.; Mekhtiyev, S. D.; Bakhshizade, A. A.; Kambarov, Yu. G.

TITLE: [illegible] of low-molecular olefins.

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 4, 1964, 41-45

TOPIC TAGS: ethylene, propylene, catalysis

Abstract: This article presents the results of one of the stages in a detailed study of the joint dimerization of low-molecular olefins in an effort to reveal [illegible] and to seek ways to [illegible]

ethylene:propylene ratio of [illegible] in the presence of a catalyst with respect to the weights of ethylene and propylene, the conversion of the

Card 1/2

olefins comprises 70-90%. About [illegible]

Orig. art. has 1 figure, 3 formulas, and 1 table.

ASSOCIATION: none

Card 2/2

SELIDOV, N.V.; [illegible] R.A.; BARMEHIZADE, A.I.

Dimerization of cyclopentadiene. Azerb. khim. zhur. no.5: 81-86 '64. (MIRA 18:3)

L 01153-66 EWT(m)/EPF(c)/EWP(j)/T RPL WW/RM

ACCESSION NR: AP5022004 UR/0286/65/000/014/0077/0077
678.742.2-134.23

AUTHOR: Dalin, M. A.; Bakhshi-Zade, A. A.o.; Kambarov, Yu. G. o.; Seidov, N. M. o.; Chirkov, N. M.; Tsvetkova, V. I.; Lisitsyn, D. N.; Arutyunov, I. A.

TITLE: A method for producing an ethylene propylene elastomer. Class 39, No. 172989

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 77

TOPIC TAGS: elastomer, ethylene, propylene, copolymerization, polymerization catalyst

ABSTRACT: This Author's Certificate introduces a method for producing an ethylene propylene elastomer by copolymerization of ethylene with propylene in a solvent in the presence of an organometallic Ziegler catalyst. Copolymerization is simplified by using liquid propylene as the solvent.

ASSOCIATION: none
SUBMITTED: 05Jul61 ENCL: 00 SUB CODE: MT
NO REF SOV: 000 OTHER: 000

Card 1/1 DP

L 4527-66 EWI(m)/FCC/I IJP(c)

ACC NR: AP5024641 SOURCE CODE: UR/0048/65/029/009/1714/1718

AUTHOR: Bakhtadze, A.K.; Guzhavin, V.V.; Ivanenko, I.P.

ORG: Scientific Research Institute of Nuclear Physics, Moscow State University im. M.V.Lomonosov (Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo)

TITLE: On taking ionization losses into account in electromagnetic cascade theory /Report, All-Union Conference on Cosmic Ray Physics held at Apatity 24-31 August 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 9, 1965, 1714-1718

TOPIC TAGS: secondary cosmic ray, cosmic ray shower, electron, photon, mathematic method

ABSTRACT: The authors present without detailed proof differential operators which approximate under certain conditions the integral operator of electron-photon cascade theory. Such operators are presented for the four cases in which the cross sections are those of Bethe and Heitler with complete screening or with correct screening and ionization losses either included or neglected; such an operator is also presented for the case of completely screened Bethe-Heitler cross sections but with the electron angular distribution taken into account. The solutions of the cascade problem obtained with the aid of these operators are discussed. The authors have also solved

Card 1/2

L 4021-66

ACC NR: AP5024641

the one-dimensional cascade equations with the cross sections of M.L.Ter-Mikaelyan (Dokl. AN SSSR, 94, 1033, 1954; Izv. AN SSSR. Ser. fiz., 19, 657, 1955), which take account of polarization of the medium, and with the cross sections of A.B.Migdal (Dokl. AN SSSR, 96, 49, 1954; Zh. eksperim. i teor. fiz., 32, 633, 1957), which are valid at very high energies. The use of the Ter-Mikaelyan cross sections removes the low energy logarithmic divergence of cascade theory. The solutions of the very high energy cascade equations, using the Migdal cross sections at energies of $10^{18}$-$10^{20}$ eV, differ from those of the cascade equations valid at lower energies mainly in scale: the cascade unit is replaced by a length proportional to the square root of the primary energy. Orig. art. has: 20 formulas and 2 figures.

SUB CODE: NP/ SUBM DATE: 00/ ORIG REF: 005/ OTH REF: 003

Card 2/2

L 4275-66 EWT(m)/EPF(c)/EWP(j)/T RPL RM/WW

ACCESSION NR: AP5024482 UR/0316/65/000/003/0073/0079

AUTHOR: Seidov, N. M.; Dalin, M. A.; Kambarov, Yu. G.; Arutyunov, I. A.; Bakhshizade, A. A.

TITLE: Preparation of an ethylene-propylene elastomer in a liquid propylene medium

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 3, 1965, 73-79

TOPIC TAGS: ethylene, propylene, copolymerization, vanadium compound, organoaluminum compound, polymerization catalyst

ABSTRACT: Certain relationships were studied in the copolymerization of ethylene with propylene between -20 and +50C in the presence of the catalytic system $VCl_4$ + $(i\text{-}C_4H_9)_2AlCl$ in liquid propylene. The yield of the copolymer was found to be strongly dependent on the quantity of trace impurities present in the monomers: traces of allene and methylacetylene, which are catalyst poisons, sharply reduce this yield. As the temperature rises, the yield and molecular weight of the copolymer decrease. Ethylene is the copolymerization activator; as its content increases, the molecular weight of the copolymer also increases. In the presence of the above catalytic system, the relative activity of ethylene is 802 times as high as that of propylene. It is shown that the copolymer com-

Card 1/2

L 4275-66
ACCESSION NR: AP5024482

3

position can be easily regulated by changing the composition of the liquid phase. Orig. art. has: 5 figures and 2 tables.

ASSOCIATION: VNIIOlefin #4,55

SUBMITTED: 05May64 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 003 OTHER: 011

Card 2/2 DP

BAKHSHIZADE, A.A.; GUSEYNOVA, Z.D.; TANIYANTS, K.D.; BELEN'KAYA, Ye.L.

Production of high-purity propylene. Azerb. khim. zhur. no. 2: 24-30 '65. (MIRA 18:12)

1. VNIIolefin.

AKHMEDZADE, D.A.; YASNOPOL'SKIY, V.D.; BAKHSHIZADE, A.M.;
KHANLAROVA, M.A.; MEKHTIYEVA, M.

On polymerization of propylene. Azerb. khim. zhur. no.2:
51-53 '63. (MIRA 16:8)

24,2000

S/022/62/015/003/006/008
D234/D308

AUTHORS: Rezikyan, A.M. and Bakhshyan, G.G.

TITLE: Motion of an electron in crossed inhomogeneous electric and magnetic fields

PERIODICAL: Akademiya nauk Armyanskoy SSR. Izvestiya, v.15, no.3, 1962, 107-114

TEXT: The electric field is the one between two concentric cylinders and the magnetic field is produced by a current flowing in the inner cylinder. The initial velocity of the electron is assumed to be different from 0. An approximate solution of the equations of motion is obtained by replacing an exponential expression by five terms of its series expansion. The electron gains velocity in the axial direction; this may be used for acceleration purposes and there can be a flow of matter in plasma media placed in such fields. There are 5 figures.

√B

ASSOCIATION: Institut radiofiziki i elektroniki AN Armyanskoy SSR

~~Card 1/2~~

BAKHSOLIANI, T.G.

Succession of the main forest formations and processes of reforestation of burned areas in the Nedzvi Gorge. Trudy Inst.lesa AN Gruz.SSR 11:201-212 '62. (MIRA 16:2)
(Nedzvi region--Forest reproduction) (Plant succession)

BAKHTADZE, A.K.

Solution of equations in one-dimensional cascade theory of electron-photon showers at random boundary conditions and form of source function. Vest. Mosk. un. Ser. 3: Fiz., astron. 19 no.3:28-37 My-Je '64. (MIRA 17:11)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo universiteta.

L 04416-67 EWT(m) IJP(c)
ACC NR: AP6031661 SOURCE CODE: UR/0367/66/004/001/0161/0168

AUTHOR: Bakhtadze, A. K.; Ivanenko, I. P.

ORG: Institute of Nuclear Physics of the Moscow State University (Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta)

TITLE: Influence of polarization of a medium on the development and energy characteristics of electron-proton showers

SOURCE: Yadernaya fizika, v. 4, no. 1, 1966, 161-168

TOPIC TAGS: cosmic ray shower, proton interaction, electron interaction, pair production, spectral energy distribution

ABSTRACT: The authors develop a one-dimensional cascade theory of shower production in a medium, with and without allowance for the ionization losses, in the case of total screening (for media with small and medium Z). The Bethe-Heitler expression (Proc. Roy. Soc. v. 146, 83, 1934) is used for the probability of pair production in medium in the case of total screening. The general equations of the one-dimensional theory are derived and solved by a procedure similar to that used by S. Z. Belen'kiy (UFN v. 69, 591, 1959 and earlier). The energy spectra of the particle number in the shower and the dependence of the particle number on the depth are determined from these equations and the results are compared with other published data. An advantage

Card 1/2

L 09416-67
ACC NR: AP6031661

of the method is that all the equilibrium spectra remain finite when account is taken of the polarization, unlike the Bethe-Heitler cross sections, which lead to singularities. Orig. art. has: 2 figures, 13 formulas, and 4 tables.

SUB CODE: 20/ SUBM DATE: 22Apr65/ ORIG REF: 005/ OTH REF: 001

Card 2/2

BAKHTADZE, B.

"Reconditioning Cylinder Heads of the Engine STZNATI," MTS, 12, No.3, 1952

BAKHTADZE, E. M. Cand Med Sci -- (diss) "~~Materials concerning~~ Data for the pharmacology of "afillin" and "afillidin"." Tbilisi, Georgian Med State Publishing House, 1957. 16 pp. (Tbilisi State Med Inst) 200 copies. (KL, 8-58, 108)

V

COUNTRY : USSR
CATEGORY : Pharmacology and Toxicology. Cardiovascular Agents
ABS. JOUR. : RZhBiol., No. 1 1959, No. 4586

AUTHOR : Bakhtadze, E. M.
INST. : Tbilisi Medical Institute
TITLE : Effect of Aphylline and Aphyllidine upon Interoceptors

ORIG. PUB. : Tbilisis sameditsino instituti. Shromebi, Tr. Tbilissk. med. in-t, 1957, 13, 255-265
ABSTRACT : Weak solutions of aphylline (I) and aphyllidine (II; 0.01-0.05-0.1-1%) stimulate the receptors of the small intestine and produce a reflex increase of blood pressure, and an increase in the frequency and depth of respiration. Strong solutions of I and II (5-10%) depress the receptors and produce a decrease of blood pressure and weakening of respiration due to elimination of the afferent impulses of the interoceptors of the intestine. The depressing effect of I and II

CARD: 1/2

COUNTRY :
CATEGORY : V

ABS. JOUR. : RZhBiol., No. 1 1959, No. 4586

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : upon the receptors does not form a part of the
cont'd. hypotensive mechanism of I and II. The experiments were conducted according to V. N. Chernigovskiy's method.-- From the author's summary

CARD: 2/2

ANAN'YEV, B.G., professor, doktor pedagogicheskikh nauk; BAKHTADZE, G.A., doktor meditsinskikh nauk; GLONTI, T.I., kandidat meditsinskikh nauk.

Use of psychophysiology in complex diagnosis of postcommotio-contusion states. Trudy Gos.inst.po izuch.mozga 15:146-157 '47. (MLRA 7:2)

(Psychology, Physiological) (Brain--Wounds and injuries)

BAKHTADZE, G. G.

"The Pharmacology of Lily Preparations." Cand Med Sci, Inst of Clinical and Experimental Cardiology, Acad Sci Georgian SSR, Tbilisi, 1953. (RZhBiol, No 6, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

BAKHTADZE,G.G.

Destructibility of active elements of Convallaria in the gastro-intestinal canal. Soob.AN Gruz.SSR 16 no.1:61-67 '55.
(MLRA 8:12)

1. Akademiya nauk Gruzinskoy SSR, Institut klinicheskoy i eksperimental'noy kardiologii. Predstavleno deystvitel'nym chlenom Akademii M.D.TSinamdsgvrishvili
(Lilies of the valley--Physiological effects)

USSR / Pharmacology, Toxicology, Cardiovascular Agents U-6

Abs Jour : Referat Zhur-Biol., No 1, 1958, 3484

Author : Bakhtadze.

Inst : Not given

Title : The Effect of the Active Principles of Convallaria majalis on Higher Nervous Activity.

Orig Pub : Tr. In-ta klinich. i eksperim. kardiol. AN Gruz SSR, 1956 (1957), 4, 251-259.

Abstract : 40-60 minutes after a suboutaneous injection of 0.5-1 ml of convasid, there was a weakening of excitatory processes (a decrease in conditioned salivation) overlying a strengthening of internal inhibition (shortening of the extinction time of positive reflexes). A subcutaneous injection of convasid in a dose of 2-3 ml caused a desruption of higher nervous activity i.e. decreased size

Card : 1/2

USSR / Pharmacology, Toxicology, Cardiovascular Agents U-6

Abs Jour : Referat Zh.-Biol., No 1, 1958, 3484

Abstract : of the positive conditioned reflexes without a change in differentiation. Not infrequently the reflexes disappeared altogether. When the higher nervous activity was restored to normal, phasic phenomena were observed.

Card : 2/2

BAKHTADZE, G.G.

Effect of convallaria majalis preparations on intestinal interecepters. AN Gruz.SSR 17 no.4:359-364 '56. (MIRA 9:9)

1.Akademiya nauk Gruzinskoy SSR, Institut klinicheskoy i eksperimental'noy kardiologii, Tbilisi. Predstavlena akademikom M.D.TSinamdzgvrishvili.

(LILIES OF THE VALLEY) (INTESTINES--INERVATION)

USSR / Pharmacology, Toxicology. Cardiovascular Drugs. V

Abs Jour: Ref Zhur-Biol., No 9, 1958, 42384.

Author : Bakhtadze.
Inst : Tbilisi Medical Institute.
Title : The General Action and Toxicity of Convallaria Juice.

Orig Pub: Tr. Tbilissk. med. in-t, 1957, 10, No 2, 33-38.

Abstract: The juice of the fresh plant of convallaria - a new active galenic preparation. It was established in experiments on mice (34) and cats (24) that the $DL_{100}$ of I by subcutaneous injection, was equal to 30 ml/kg in mice, 3 ml/kg for cats. Given perorally the action of I is 20 times weaker than by intravenous route. The signs of toxicity of I are the same as those of other convallaria preparations. "From the author's abstract." -- From author's summary.

Card 1/1

BAKHTADZE, G.G.

[Juice of the lily-of-the-valley] Sok landysha. Tbilisi, Sabchota Sakartvelo, 1958. 55 p. (MIRA 13:9)
(CARDIAC GLYCOSIDES)

BAKHTADZE, G.G.

Blood serum glycoproteins(hexoses) in different states of vascular tonus. Soob. AN Gruz. SSR 32 no.2:351-357 '63.

(MIRA 18:1)

1. Submitted December 9, 1963.

BAKHTADZE, G.G.

Arterial hypotonia caused by conditioned response and drugs.
Soob. AN Gruz. SSR 39 no.2:459-465 Ag '65. (MIRA 18:9)

1. Tbilisskiy gosudarstvennyy meditsinskiy institut. Submitted February 20, 1965.

BAKHTADZE, G.G., dotsent

Two cases of postural hypotonia. Sov. med. 28 no.10: 135-136 O '65. (MIRA 18:11)

1. Kafedra gospital'noy terapii lechebnogo fakul'teta (zav.-prof. K.S. Virsaladze) Tbilisskogo meditsinskogo instituta.

BAKHTADZE, G.M., dots., kand.ekon.nauk

Expansion of the textile industry in the Georgian S.S.R. Tekst. prom. 20 no.8:7-10 Ag '60. (MIRA 13:9)
(Georgia--Textile industry)

BAKHTADZE, G.M., dotsent, kand.ekonomicheskikh nauk

Expansion of the shoe and leather industry in the Georgian S.S.R. Kozh.-obuv.prom. 3 no.6:11-14 Je '61. (MIRA 14:8)
(Georgia--Leather industry) (Georgia--Shoe industry)

DZHIKAYEVA, G.A.; BAKHTADZE, I.D.

Experimental study of the physico-mechanical properties of gaize and gaize mortars. Trudy Inst. stroi. dela AN Gruz. SSR 4:231-237 '53. (MLRA 9:10)

(Glauconite) (Building materials)

BAKHTADZE, I.D.

Concrete based on limestone-shellrock of the Bagerovo deposits in Crimea Province. Trudy Inst.stroi.dela AN Gruz.SSR 5:171-183 '55. (MLRA 9:8)

(Concrete)

YAKUBOVICH, M.A., BAKHTADZE, I.D.

Temporary instructions on making and using shell-rock and limestone concretes in producing plain and reinforced concrete construction elements. Trudy Inst. stroi. dela AN Gruz. SSR 6:121-132 '57.
(MIRA 11:8)

(Concrete)

TSILOSANI, Z.N., BAKHTADZE, I.D.

Testing lightweight rocks of the Akhalkalaki region to be used as concrete aggregates. Trudy Inst. stroi. dela AN Gruz. SSR 6:143-165 '57. (MIRA 11:8)

(Lightweight concrete--Testing)
(Building materials--Testing)

TSILOSANI, Z.N.; BAKHTADZE, I.D.

Concretes made with porous aggregates from Nodega deposits.
Trudy Inst.stroi.dela AN Gruz.SSR. 7:166-179 '59.
(MIRA 13:5)

(Lightweight concrete)
(Akhalkalak District--Aggregates(Building materials))